

International Organizations, Advocacy Coalitions and Domestication of Global Norms: Debates on Climate Change in Canada, the US, Brazil and India

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National climate policies are shaped by international organizations (IOs) and global norms. Drawing from World Society Theory and the Advocacy Coalition Framework, we develop two related arguments: (1) one way in which IOs can influence national climate policy is through their engagement in mass-mediated national policy debates and (2) national organizations involved in the policy process may form advocacy coalitions to support or oppose the norms promoted by IOs. To examine the role of IOs in national policy debates and the coalitions that support and oppose them, we use discourse network analysis on over 3500 statements in eleven newspapers in Canada, United States, Brazil and India. We find that in the high-income countries where greenhouse gas emissions are high (Canada and the US), IOs are less central in the policy debates and the discourse network is strongly clustered into competing advocacy coalitions. In the low emitting countries (Brazil and India) IOs are more central and the discourse network is less clustered. Relating these findings to earlier research leads us to suggest that the differences we find between high and low emitting countries may be to some extent generalizable to these country groups beyond our four cases.

Keywords: climate policy; advocacy coalition framework; discourse network analysis; domestication; international organizations; global norms

1. Introduction

National climate policies are shaped by international organizations (IOs) and treaties, and the policy norms they promote (Meyer et al., 1997; Schofer & Hironaka, 2005; Hironaka, 2014). These include treaties such as The United Nations Framework Convention on Climate Change (UNFCCC), intergovernmental organizations such as Intergovernmental Panel on Climate Change (IPCC) and transnational NGOs such as Greenpeace. The norms they promote include the scientific consensus on anthropogenic climate change, principles such as that of common but differentiated responsibilities (CBDR) and the obligation to define national emission reduction targets and submit them to the United Nations.

However, countries differ substantially in how they have embraced climate policy norms promoted by IOs. While much research has looked into climate change politics in the international arena (e.g. Roberts & Parks, 2007; Roberts, 2011; Stoett, 2012), less comparative work has been done to understand national differences in climate change policymaking (Purdon, 2015) and the role of IOs in different political economic-contexts.

One way in which IOs can influence national policymaking is by engaging in public policy debates taking place in different countries. IOs publish reports such as the IPCC assessment reports, organize public events such as the UN COP conferences that become global media events and issue recommendations for national governments. These reports, events and recommendations are often followed by approval or resistance by national level organizations active in the climate policy debate, resulting in political disputes in arenas such as the national mass media over the arguments of IOs.

In this paper, we are interested in two questions: (a) how central are IOs in mass-mediated national policy debates on climate change in different countries, and (b) what kinds of advocacy coalitions support and oppose the global norms promoted by IOs? Our method, discourse network analysis, enables us to analyze these debates from a network perspective, to assess how central IOs are in the different countries' policy debates in mass media and what kinds of coalitions of actors agree or oppose them.

Our theoretical framework combines the idea of domestication of global norms developed in the world society literature on the one hand, and the advocacy coalition framework (hereafter ACF) on the other. The world society literature directs our attention to the role of IOs in national policy processes, and the concept of domestication highlights that various organizations at the national level may seek to ally with or oppose IOs and

the norms they promote (Qadir & Alasuutari, 2014; Alasuutari, 2016). The advocacy coalition framework offers systematic tools to analyze these alliances and resistance, by focusing on how organizations group into coalitions based on shared value priorities and policy preferences (Sabatier & Jenkins-Smith, 1988; 1999).

Our empirical material consists of more than 3500 statements in the most widely read newspapers in Canada, the United States, Brazil and India. In terms of absolute country-level emissions these countries are all major emitters due to their sheer size, and consequently, important actors in global climate change politics. In terms of per capita emissions, however, the countries form two distinct groups. According to the latest World Bank data (2014), India's emissions per capita are a mere 1.7 tons, closely followed by Brazil at 2.6 tons. Canada (15.1 tons per capita) and the US (16.5 tons per capita), in contrast, are among the world's highest emitter in per capita terms. Per capita emissions are closely linked with per capita income levels, middle income India and Brazil emitting considerably less than high income Canada and US. Thus, this set of four countries enables us to compare differences in national policy debates between high and middle income countries. This is relevant for two reasons. First, existing research has shown that IOs tend to play stronger roles in policy processes in lower income countries than in high income ones (Frank et al., 2007; Longhofer and Schofer, 2010). Second, the global norms concerning these two sets of countries are different: more cuts are required from high-income countries (Annex I countries under the Kyoto Protocol) than lower income ones (non-Annex I countries). This may contribute to differences between the two country groups in the levels of resistance faced by IOs.

We find that IOs are less central in the debates in the high-emitting, high-income countries (the US and Canada), where they are embedded in a conflictual discourse network which is strongly clustered into competing advocacy coalitions supporting or opposing global norms. In the low-emitting lower income countries (Brazil and India), IOs are more central and the discourse networks much less conflictual, showing less opposition to global norms on climate change.

2. Analytical Framework & Research Questions

Our analytical framework combines the world society literature on the domestication of global norms with the Advocacy Coalition Framework literature. The world soci-

ety literature directs our attention to the role of international organizations (IOs) in national policy debates, and points out that domestic actors may contest or defend the norms promoted by IOs. The ACF literature provides us with tools to analyze how the domestic organizations that contest and defend the norms promoted by IOs group into coalitions – something that the world society literature has not looked into. Thus, the two theoretical literatures, combined into a single analytical framework, enable us to draw a picture of the role of IOs and their supporters and opponents in national policy debates that neither theory in itself could not do.

The world society literature has shown that IOs are important drivers of environmental policymaking, including climate change policy, at the national level. The literature has analyzed environmentalism as a set of global cultural norms, embedded in a global environmental regime comprising interstate institutions and treaties, institutionalized environmental sciences and international CSOs (Meyer et al., 1997; Schofer & Hironaka, 2005; Hironaka, 2014). The extent to which a country adheres to these norms is affected by its degree of integration in the world society: the more the international treaties a country participates in and the more international non-governmental organizations are present, for instance, the more likely a country is to enact ambitious environmental policies (Schofer and Hironaka, 2005).

In this paper, we argue that one way in which IOs can influence national policymaking is through their role in policy debates in national mass media. Research on media coverage of climate change has shown that this is particularly true of the climate change debate, where the publication of the IPCC 4th assessment report in 2007 and the UN COP 15 conference in 2009 have been important drivers of public debate across the world (Schäfer et al., 2014). This observation leads us to ask:

RQ1: How central are IOs in mass mediated national climate policy debates in different countries?

While the world society literature has demonstrated that countries indeed do follow global cultural norms and implement global organizational models, it has rarely paid attention to how global norms are often subject to heated debates, where national organizations defend and others oppose these norms. Noting this gap, Qadir and Alasuutari (2014) have suggested that more research should pay attention to what they term domestication of global norms. The idea is that global policy norms do not simply diffuse, but

that national political actors have a paramount role in the process as the global ideas are “made part of national political discourses and practices” (Alasuutari 2016, p. 21). When a global policy problem becomes a salient issue for national policy makers, domestic organizations start competing over the framing of it in political arenas, including the mass media (Alasuutari, 2016). While this focus on framing has produced interesting insights into how global norms enter national contexts, we add to the domestication perspective by drawing on the advocacy coalition framework (ACF) (Sabatier & Jenkins-Smith, 1998; Jenkins Smith et al., 2014). The ACF argues that organizations aiming to influence policymaking in a particular policy domain form competing advocacy coalitions based on shared policy core beliefs. These include value priorities, the elemental causes and the preferred solutions for addressing the policy problem (Jenkins-Smith et al., 2014).

A limitation of the ACF literature has long been that the framework has been mostly applied to policy processes at the national or sub-national level. Cross-country comparative applications of the framework have been rare (see, however, Ingold et al., 2016). Furthermore, ACF studies focusing on national policy subsystems do not usually acknowledge the role of IOs as part of advocacy coalitions (two exceptions are Litfin, 2000 and Sewell, 2005). The ACF should, in general, pay more attention to the external context of policy subsystems (Henry et al., 2014).

Thus, we contribute to the world society literature on the domestication of global norms by looking into the role of advocacy coalitions in the domestication process, and to the ACF by engaging in a comparative study on the role of IOs in advocacy coalitions. We argue that the relative strength of coalitions that defend and oppose global policy norms are an important factor determining what kind of national policy response does the domestication process lead to. Thus, our second research question is:

RQ2: What kind of advocacy coalitions defend the global norms on climate change in the mass-mediated policy debates in different countries, and what kind of coalitions oppose these norms?

It is worth noting that this paper focusses on actors – the positions of IOs and national organizations in the discourse networks. Therefore, less attention is paid to the content of the claims they make. In table 3 in the material and methods section below we do present the most contentious and consensual issues debated in each country, but this is mostly to make transparent our coding scheme and the set of claims our network analysis is built on. In the analysis section we discuss the content of the claims only to the

extent that it is necessary for understanding how actors group into coalitions in the discourse network. Why certain issues become the foci of contestation or consensus in each country, need to be addressed in future studies.

3. Case Selection, Materials and Methods

We compare public climate policy debates in four countries: Canada, United States, Brazil and India. The first two are high-income countries with high per capita emissions, and their administrative, political and economic institutions have been developed and consolidated over long periods. In these countries, attempts to bring about more ambitious climate policies and the related global norms have faced resistance (Macdonald, 2008; Rabe, 2010), even taking the form of climate denialism, advocated by an organized climate change counter movement (McCright & Dunlap, 2003; Farrel, 2015). Brazil and India belong to the so-called BASIC countries that are increasingly influential in global politics of climate change (Hallding et al., 2013). As large countries, they are both major emitters, but emissions per capita are low. Both countries are strongly committed to the principle of common but differentiated responsibilities (CBDR) (Lahsen, 2004; Dubash, 2009). CBDR is the main moral principle inscribed in the Kyoto Protocol, stating that while all countries share a common responsibility to mitigate greenhouse gas emissions, high-income countries carry the major burden of emission reductions (Honkonen, 2009). In Brazil and India, there has also been little questioning of the scientific consensus on anthropogenic climate change (Painter & Ashe, 2012).

Our data consists of newspaper articles from the years 2007 and 2008, the most intense period of climate change debate in all four countries to date. During this period, international organizations were exceptionally active on climate change, yielding much debate and news material for our investigation. In 2007, the Inter-Governmental Panel on Climate Change (IPCC) released its 4th Assessment Report and received the Nobel Peace Prize jointly with Al Gore. Media coverage of climate change increased globally, peaking during the 15th Conference of the Parties in Copenhagen in 2009 (Schmidt et al., 2013; Broadbent et al., 2016). Domestic climate legislation also progressed in all four countries. The US Congress discussed a federal cap and trade system (Rabe, 2010). Canada debated a federal carbon tax after its British Columbia province introduced its own carbon tax in 2008 (Sodero, 2011). Brazil introduced its voluntary climate plan in 2008 (Viola, 2013) while the Brazilian business sector and some Amazon-based politicians started to demand

more ambitious national commitments (Hochstetler & Viola, 2012). India’s civil society started actively engaging in climate change activities (Ylä-Anttila & Swarnakar, 2017) and India established a Prime Minister’s Council on Climate Change in 2007 (PMCCC). Intense political debate on climate change thus marked these countries during this key period (Broadbent et al., 2016).

Our empirical data consists of articles from eleven newspapers (Table 1) selected for their prominence (high circulation) and political diversity, ideally representing different ends of the politics spectrum in each country. Thus, they can be expected to represent the climate policy debate without excessive political bias.

Table 1. Newspapers used in data collection in each country:

The US: The Wall Street Journal, USA Today and The New York Times
Canada: National Post, The Globe and Mail
Brazil: Folha de São Paulo, O Estado de São Paulo, Valor Econômico
India: The Times of India, The Hindu, The Indian Express

This study is part of the international COMPON research project covering 20 countries. Our data collection and coding follow the common research protocol of the project. We used the Factiva database to retrieve all articles during the chosen time period that included the terms “global warming” or “climate change”. We then manually removed those articles that did not primarily deal with climate politics or anthropogenic climate change. For final coding, we took a random sample of all articles, the sampling protocol allowing some variation according to resources of the different national teams. The total number of articles coded was 522 of 2,996 in Brazil; 603 of 3,015 in Canada; 283 of 1,206 in India and 648 of 1,221 in United States.

We use discourse network analysis (Leifeld, 2010) to discover which actors engage in climate policy debates in the media, and how do they group into advocacy coalitions based on these beliefs. A growing number of studies argues that discourse coalitions in the public sphere have a crucial impact on policy processes (e.g. Bulkeley, 2000; Leifeld & Haunss, 2012; Rennkamp et al., 2017). As the media is a significant arena for

the politics and framing of climate change (Boykoff, 2011), ACF scholars have increasingly used media material to trace policy advocacy coalitions (e.g. Leifeld, 2013; Lodge & Matus, 2014; Kukkonen et al., 2017).

The unit of analysis in DNA is a statement (Leifeld, 2010). We coded direct statements from organizations and statements being paraphrased by the journalist. Three different attributes were coded for each statement: 1) *the organization* making the statement, 2) the *belief category*, derived inductively from the data, into which the statement falls, and representing a policy core belief in the ACF, and 3) *agreement* or *disagreement* with the belief category.

Table 2. Number of articles, statements, organizations and belief categories in each country.

	Articles	Statements	Organizations	Belief categories	Reduced belief categories
USA	648	1410	333	28	28
CAN	603	1202	278	269	49
BRA	522	639	192	69	50
IND	283	472	167	83	43

As table 2 shows, the amount of media coverage of climate change varies between the countries, as does the number of statements from organizations within the articles. The number of coded belief categories also varies. This is because the coding protocol allowed country teams to inductively draw the categories from their material, and some opted to use a more detailed list of codes than others. To make the categories comparable across countries, we combined categories in those countries where there were many. For example in Canada, the 6 categories “climate science is settled”, “CC is caused by humans”, “claims concerning CC are not exaggerated”, “GCC is real”, “greenhouse gases cause global warming” and “IPCC predictions are overly conservative” were combined into the single category “scientific claims that greenhouse gases contribute to climate change are valid.”

From the final list of belief categories, we selected the three most debated *contentious* beliefs and the three most debated *consensual* beliefs (Table 3). In each country,

these six belief categories subsumed approximately 60 percent of all statements, suggesting that they adequately represent the main foci of media debate in each country. We used the contentious beliefs to discern competing advocacy coalitions and all the six beliefs to analyze the centrality of IOs in the overall debate.

Table 3. Most contentious and consensual beliefs in each country during 2007-08, agree/disagree (%).

	Contention	Consensus
Canada	Scientific claims that GHG contribute to climate change are valid, 48/52 N=83	Global warming causes negative environmental impacts, 91/9 N=117
	Addressing climate change is harmful for the economy, 46/54 N=100	Carbon tax is an appropriate way for Canada to reduce emissions, 82/18 N=65
	Canada should start reducing emissions regardless of what developing countries do, 40/60 N=57	Federal government is taking meaningful action on climate change, 24/76 N=159
USA	Scientific claims that GHG contribute to climate change are valid, 58/42 N=106	Cap and trade is the legislative approach the US should take in addressing climate change, 80/20 N=315
	Regulating emissions to protect the environment is more important than protecting the economy, 37/63 N=97	Increasing alternative energy is the approach the US should take in addressing climate change, 89/11 N=71
	Industry should be regulated in the US to decrease GHG emissions that contribute to climate change, 37/63 N=67	Higher auto efficiency standards are necessary in the US to reduce GHG emissions that cause climate change, 73/27 N=111
Brazil	Biofuels are an appropriate way to mitigate global warming, 57/43 N=134	Brazil should reduce its deforestation to achieve emission reductions, 93/7 N=30

	Current Brazilian actions to reduce climate change are strong and sufficient, 35/65 N=79	Avoided deforestation should be achieved through a financial compensatory mechanism, 85/15 N=54
	Nuclear energy is viable and desirable alternative to fossil fuels, 46/54 N=37	Developed and developing countries should have different responsibilities in the climate regime, 70/30 N=64
India	Responsibility of climate change is common but differentiated, 68/32 N=69	Alternative energy is a solution to climate change, 100/0 N=33
		Environmental change is evidence for climate change, 96/4 N=137
		Climate change is real and caused anthropogenically, 95/5 N=41

We used the Visone software to (a) analyze the degree centrality of IOs in the discourse network, (b) create visual representations of the data and c) to analyze the clustering of the networks into competing advocacy coalitions using the Louvain method of community detection. The Louvain method gives a modularity score which is in the range of $[-0.5, 1]$. Generally, values 0.4 are interpreted to mean that meaningful subgroups exist in a network (Blondel et al., 2008).

4. Results

We begin by looking at the centrality of IOs in the four national policy debates (RQ1). We do this by analyzing the degree centrality (%) of international non-governmental and intergovernmental organizations in the discourse network. The higher the degree centrality of an actor, the more ties it has to other actors in the discourse network. In other words, the more statements an actor makes that attract agreement from other actors in the network, the more central the actor becomes. We find that IOs are not central actors in the policy debate in Canada and the US (Table 4). In both countries, the most central actors are national ones, especially political parties and states/provinces. While universities, national NGOs and foreign governments are more central in the Canadian case, energy companies are more central in the US. The only IO in the top 15 list in either country is the IPCC.

Table 4. Degree centrality (%) of top 15 organizations in the US and Canadian discourse network.

US	Degree (%)	Canada	Degree (%)
Democratic Party	17.052	Liberal Party	7.991
Republican Party	12.086	Pembina Institute	3.981
California	6.898	Canadian Government	3.294
Independent Party	3.026	Simon Frasier University	3.204
Supreme Court	2.512	NDP	3.166
US Government	2.506	University of Toronto	2.636
Duke Energy Corp.	2.395	David Suzuki Foundation	2.401
DuPont	2.385	University of Victoria	2.348
New York	2.215	NASA	2.155
General Electric	2.120	British Columbia	2.095
New Jersey	1.594	IPCC	1.624

Connecticut	1.524	Australia	1.480
IPCC	1.474	Natural Resources Canada	1.374
Massachusetts	1.380	Green Party	1.355
Vermont	1.335	US	1.349

In Brazil and India, IOs occupy much more central positions in the discourse networks. The lists of the top 15 most central organizations include four IOs in both countries (Table 5). In Brazil, the UN is the fourth most central of all organizations involved in the debate, followed by Greenpeace (8th), the IPCC (10th) and WWF International (11th). In India, the IPCC is the most central organization, followed by the UN (3rd), Greenpeace (8th) and the World Bank (14th). The high degree of international influence on the debate in India is also visible in the fact that foreign governments are highly central: the UK is 4th, China 10th and US 11th. Universities are central domestic actors in both countries. Government actors are more central in Brazil, while states are more central in India.

Table 5. Degree centrality (%) of top 15 organizations in the Brazilian and Indian discourse network.

Brazil	Degree (%)	India	Degree (%)
President of Brazil	14.458	IPCC	12.182
Ministry of Foreign Affairs	10.734	Government of India	9.484
Ministry of the Environment	8.911	United Nations	5.803
United Nations	5.239	Tamilnadu	3.934
Brazilian Forum on Climate Change	3.595	UK	3.094
University of Rio de Janeiro	3.441	TERI	2.899
Former Brazilian Minister of Agriculture	3.082	Indian Institute of Science	2.862

National Institute for Space Research	2.851	Greenpeace India	2.123
Greenpeace Brazil	2.851	Himachal Pradesh	2.086
Brazilian Government	2.465	Exnora International	1.653
IPCC	2.414	China	1.526
WWF International	2.029	US	1.341
Amazon Environmental Research Institute	1.977	Indian Meteorological Department	1.310
University of Sao Paolo	1.644	World Bank	1.288
UNICA	1.644	University of Agricultural Sciences	1.288

Turning to our second research question, we analyze the formation of competing advocacy coalitions that variously defend or oppose global norms promoted by IOs. We do this by looking at the co-occurrence of organizations in the discourse network based on the three contentious beliefs. There is a tie between actors if they both co-occur in the same belief category, i.e. they both agree or both disagree on the same belief. We find that in Canada and the US, where IOs were less central, the discourse network is more strongly clustered into competing coalitions, some defending and others opposing the norms promoted by these organizations. In Brazil and India where IOs were more central, such resistance is mostly absent.

In Canada, the Louvain modularity score measuring the clustering of the network is 0.422, and in the US 0.492. Both are well above the threshold of 0.4 that is usually interpreted as indicating a meaningful degree of clustering in a network (Blondel et al., 2008). We found three competing coalitions in the US and five in Canada. In the US, they are: 1) the economy and skeptic coalition that believes economic growth is more important than environmental protection, opposes industrial regulation and believes that climate science is not valid, 2) the environment coalition that believes that environmental protection is more important than economic growth and that industry should be regulated, and 3) the science coalition that believes in the validity of climate science. In Canada, the coalitions are 1) the economy coalition that believes addressing climate change is harmful for the economy, 2) the environment coalition that does not believe that addressing climate

change will harm the economy, 3) the skeptic and anti-CBDR Coalition that believes that scientific claims about man-made climate change are not valid and opposes the CBDR, 4) the science coalition that believes in the validity of scientific claims, and 5) the CBDR coalition that supports the CBDR.

Figure 1. Actor co-occurrence network based on three most contentious beliefs in the Canadian news media during 2007-08, threshold more than one statement.

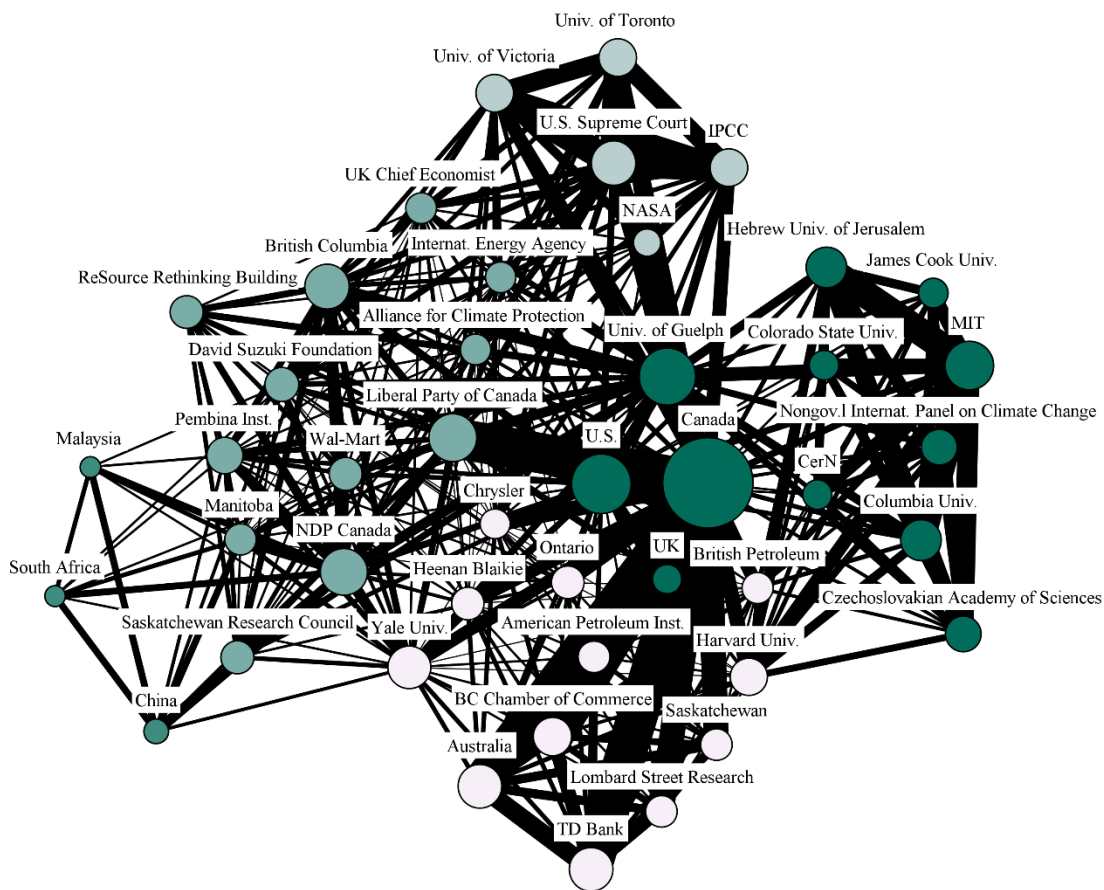
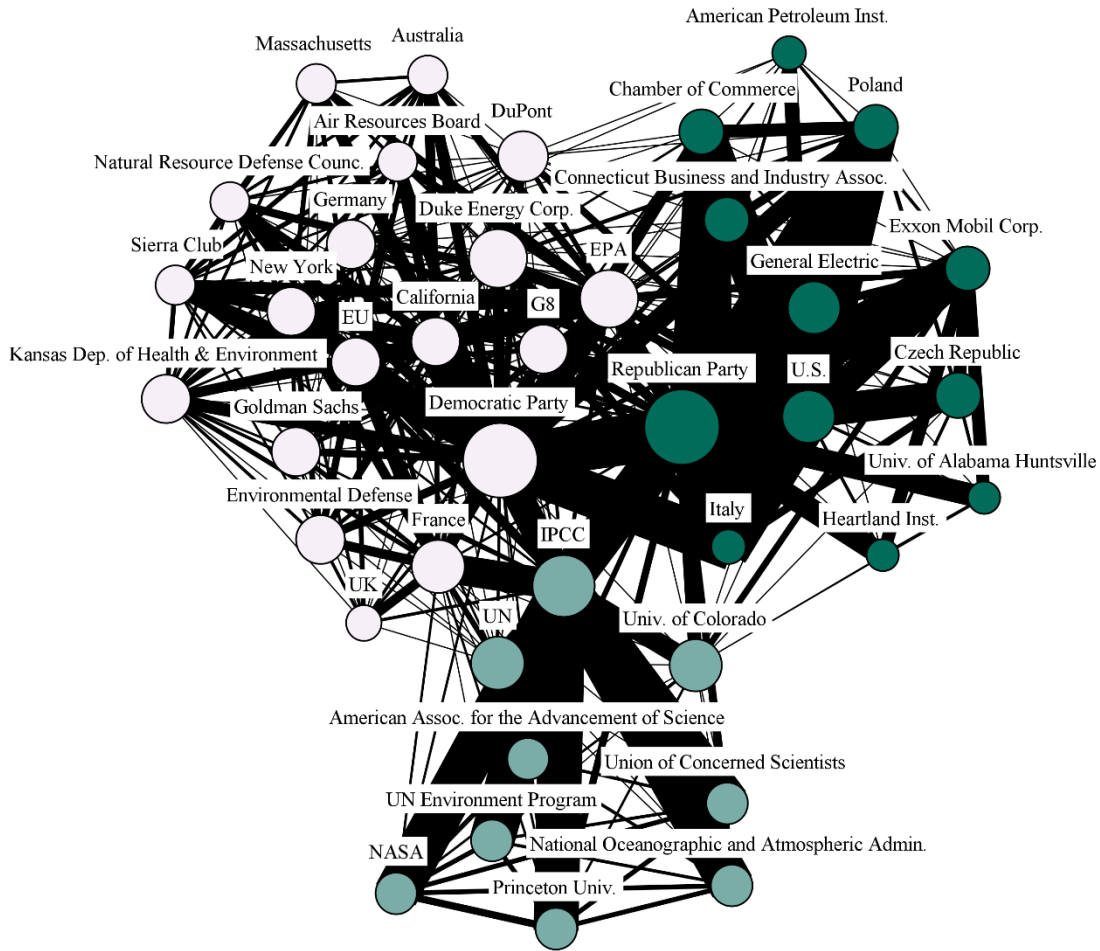


Figure 2. Actor co-occurrence network based on three most contentious beliefs in the US news media during 2007-08, threshold more than one statement.



In both countries, the coalitions that oppose the global norms consist mainly of national organizations. In the US, they include organizations from the counter movement but also business lobby groups, national industry associations, individual companies from the energy and business sector, and the Republican Party. Consistent with earlier research of US climate politics (Fisher et al., 2013; Painter & Ashe, 2012), the US debate is more ideologically charged than in any of the other three countries, reflected in discourses opposing climate legislation by invoking human nature and limited role for government. In Canada, the organizations opposing global norms based on economic arguments include the same types of actors. However, there is less of an organized counter-movement and open denial of climate science than in the US.

IOs belong to coalitions that defend the global norms. In both countries, organizations such as the IPCC belong to Science Coalition which defends the scientific consensus of anthropogenic climate change. Others such as the International Energy Agency (IEA), World Bank, Greenpeace (in Canada) and Oxfam (in the US) belong to the environment

coalition that argues for the need to reduce emissions and protect the environment. Aligning with these IOs, in both countries, are national NGOs, individual corporations, universities and opposition political parties (Democratic Party in the US, and NDP, Liberal Party and the Green Party in Canada). In the US, some states are also visible actors in the environment coalition.

Figure 3. Actor co-occurrence network based on three most contentious beliefs in the Brazilian news media during 2007-08, threshold more than one statement.

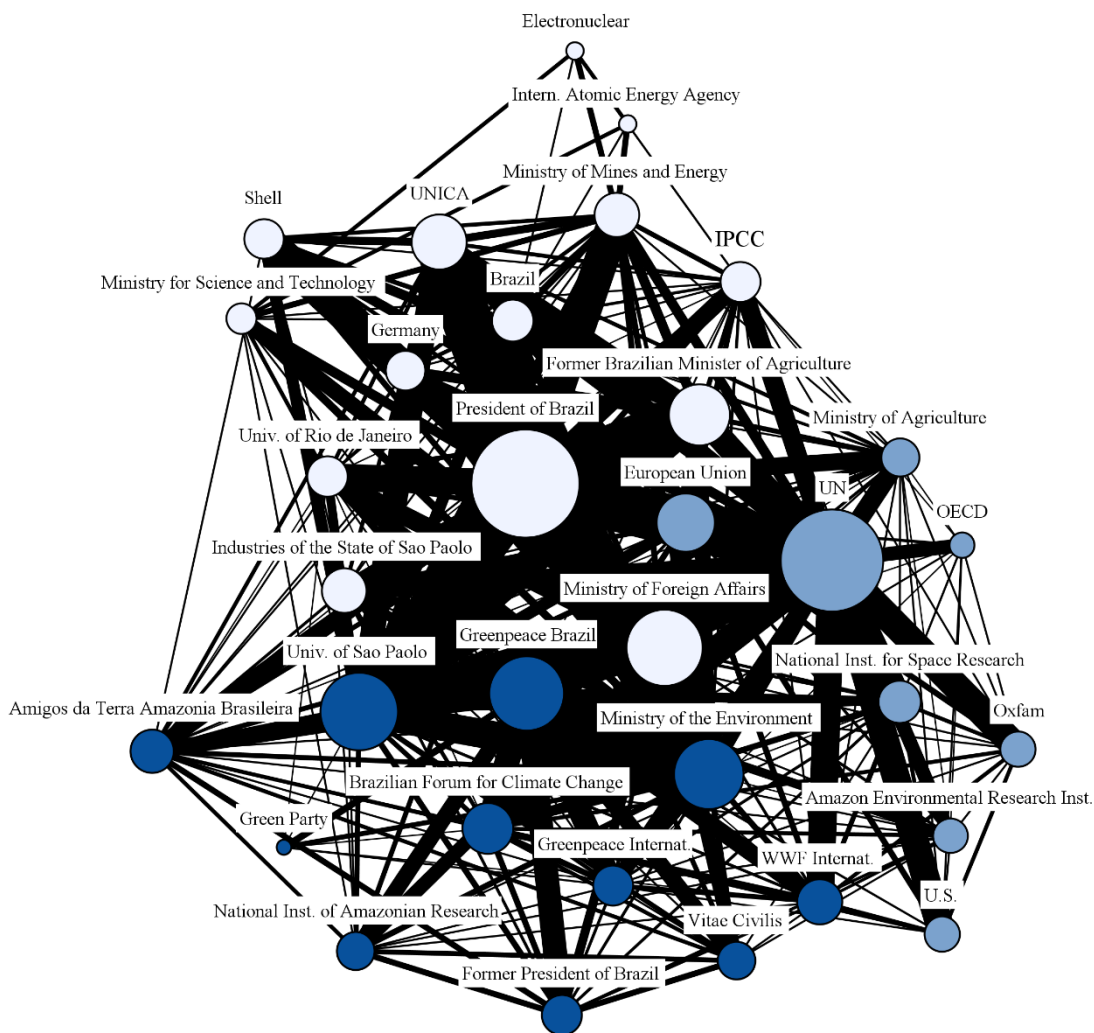
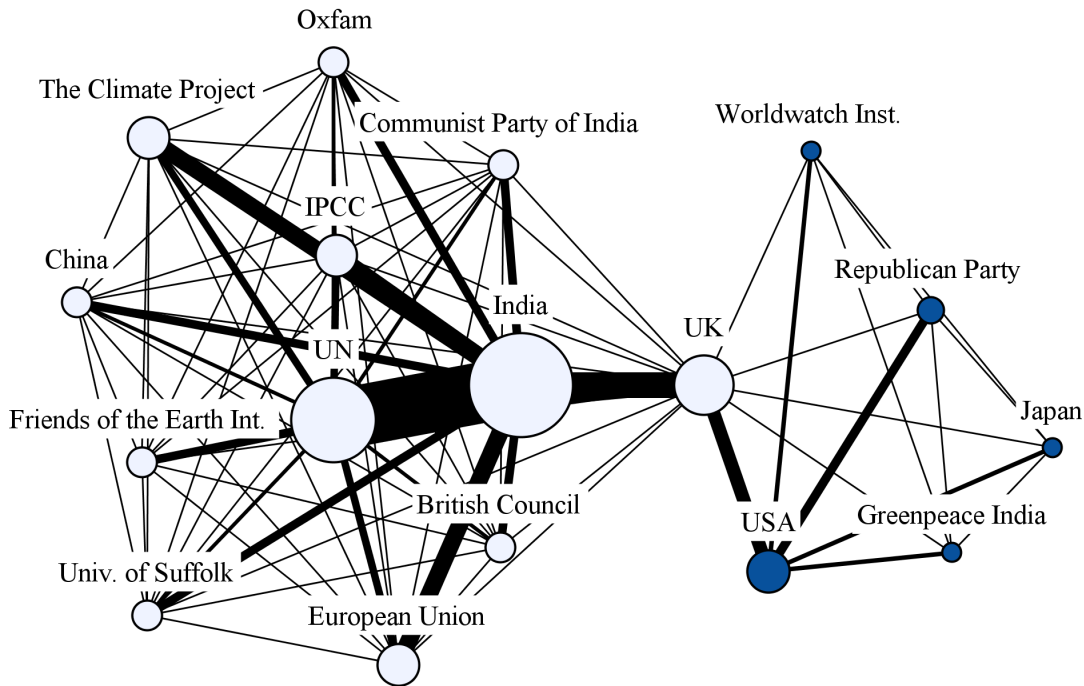


Figure 4. Actor co-occurrence network based on the one contentious belief in the Indian news media during 2007-08, threshold more than one statement.



In Brazil and India, where IOs are much more central, there is also much less resistance towards the global norms they promote. The discourse networks are less clustered than in Canada and the US. The Louvain modularity score for Brazil is 0.318 and for India 0.199. Both of these are below the threshold of 0.4, meaning that no clear coalitions are found in the network and the debate is less polarized than in Canada and the US. In Brazil, conflicts are mainly about preferred policy instruments for tackling climate change and the adequacy of Brazilian actions. Much of the debate concerns biofuels. Domestic organizations such as Brazilian government actors, industry associations, research institutes and corporations defend Brazilian biofuels as a positive mitigation option, with dissenting perspectives expressed mainly by international actors. The desirability of nuclear energy, by contrast, is subject to more dissent among domestic organizations such as research institutes, the Ministry for Environment and national NGOs. IOs such as the EU, the UN, WWF and Greenpeace oppose the use of these instruments, raising concerns over their possible detrimental environmental and social consequences. This debate, however, is not polarized enough to generate coalitions like those present in the Canadian and US debates. In India, national discussions are only divisive in terms of the CBDR. Domestic actors align to support the CBDR, joined by IOs such as the UN and the IPCC. The few organizations opposing CBDR include some foreign Annex 1- governments and NGOs.

Discussion & Conclusions

We developed an analytical framework synthesizing domestication theory and ACF to analyze the centrality of international organizations (IOs) and the opposition or support that they face from coalitions of national organizations in mass-mediated climate policy debates in Canada, the US, Brazil and India. We found that IOs are less central in the high emitting, high-income countries, Canada and the US, where the discourse network is strongly clustered into competing coalitions that variously defend and oppose global norms. In the low emitting countries, Brazil and India, the pattern is reverse: the higher centrality of IOs is accompanied with less clustering of the discourse network and less resistance to global norms.

In conclusion, we address two interrelated questions: (1) how do these findings relate to earlier literature on world society and IOs, and (2) to what extent are they generalizable to countries beyond the four that we have studied here?

First, we found that resistance to IOs is low in the countries where they are more central and vice versa. The finding that IOs are more central in lower income countries of the Southern hemisphere is consistent with earlier literature on the world society and IOs. World society scholars have demonstrated that IOs and global cultural norms tend to have stronger effects on low-income than on high-income countries (Frank et al., 2007; Longhofer and Schofer, 2010). Other scholars looking at the role of IOs in developing countries have pointed out that the interpenetration of IOs has a long and strong history in countries like Brazil and India, often taking the form of development aid. Development workers from the Global North have seen as their role to “teach” development norms to recipients in the Global South (Finnemore, 1993; Finnemore & Sikkink 1998). What is more, these practices seem to change very slowly in response to changes in global power distribution (McArthur & Werker 2016). This is a likely explanation to our finding that IOs occupy more central positions in the policy debates in Brazil and India. The finding that it is in these same countries where IOs face less resistance from national-level coalitions, in turn, is likely explained by the fact that global norms for emission reduction demand less from the lower income (non-Annex 1) countries. Even though the Paris Agreement does not contain a binding formulation of the CBDR principle like its predecessor, the Kyoto Protocol (that defined the global norms in force during the period of our data collection), there are still more strategic advantages in aligning with IOs and global norms in Brazil and India.

In addition, our results deviate from Alasuutari's study (2016) in which he looked at the amount of references being made to IOs and international comparisons in parliamentary debates in six different countries. He found out that IOs and international comparisons are markedly less present in US parliamentary debates than in any of the other six countries he studied, including Canada. However, Canada and the US look similar in their relation to global institutions and norms in our study on climate change policy debates in the media while in Alasuutari's study on parliamentary debates they look different. This difference is likely explained by Alasuutari's study not including climate policy which is a particularly globalized policy field, having mobilized domestic opposition in both Canada and the US, demonstrated by our analysis.

Second, the reflections above also suggest that our findings might be generalizable, at least to some extent, to differences between high-emitting high-income countries and low-emitting lower income countries beyond the four cases analyzed here. Further research comparing a larger number of countries would be necessary to test whether this is indeed the case. Such research should also look into factors beyond the high emitter / low emitter divide that shape national climate change debates, including, for example, political structures, structures of media institutions, relative dependence on fossil fuel industries and strength of civil society. Further research should also explore the role of IOs and the opposition or support they face in countries with high income levels but low emission levels. Further studies into the differences within the country groups, focusing on why certain topics become conflictual and others consensual, would also be welcome.

Because our data is cross sectional, we cannot establish whether there is a causal relationship between our two findings, the centrality of IOs and the lack of clustering in the discourse networks, and if so, what is the direction of causality. It may be that pre-existing support for IOs shapes national debates on climate change, or that some characteristics of pre-existing national debates creates opposition to IOs. A study using a longitudinal data set would shed light on these questions.

Finally, it is worth emphasizing that our results are based on analyses of media representations of the policy debate. The media, as a public sphere, exerts power through gatekeeping as journalists often determine the framing and use of sources (Alasuutari et al., 2013), albeit in a context of institutional influences and constraints (Boykoff & Yulsman 2013). While it is reasonable to assume that the "mediated policy networks" (Stoddart et al. 2017a, p. 387) that we study here reflect policy networks in the political sphere to some extent, centrality in media debates does not automatically translate into

power in the political sphere (Stoddart et al. 2017a; Stoddart et al. 2017b). Studies that use other material than media coverage of the policy debates are thus also needed to further support our suggestions on the role IOs in national policy debates.

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References

Alasuutari, P., 2016. *The synchronization of national policies: ethnography of the global tribe of moderns*. Routledge, New York.

Alasuutari, P., Qadir, A., (Eds.), 2014. *National policy-making: domestication of global trends*. Routledge, London.

Alasuutari, P., Qadir, A., Creutz, K., 2013. The domestication of foreign news: news stories related to the 2011 Egyptian revolution in British, Finnish and Pakistani newspapers. *Media, Culture & Society* 35 (6), 692–712.

Boykoff, M., 2011. *Who speaks for the climate? Making sense of media reporting on climate change*. Cambridge University Press, New York.

Boykoff, M., Yulsman, T. 2013. Political economy, media, and climate change: sinews of modern life. *Wiley Interdisciplinary Reviews: Climate Change* 4 (5), pages 359–371.

Broadbent, J., Sonnett, J., et al., (35 co-authors), 2016. Conflicting climate change frames in the global field of media discourse. *Socius: Sociological Research for a Dynamic World* 2, 1–13.

Bulkeley, H., 2000. Discourse coalitions and the Australian climate change policy network. *Environment and Planning C: Politics and Space* 18 (6), 727–748.

Dubash, N. K., 2009. Copenhagen: climate of mistrust. *Economic and Political Weekly* 44 (52), 8–11.

Dunlap, R., McCright, A., 2015. Countering climate change: the denial countermovement. In Dunlap, R., Brulle, R., (Eds.), 2015. *Climate change and society: sociological perspectives*. Oxford University Press, Oxford.

Farrell, J., 2015. Network structure and influence of the climate change counter-movement. *Nature Climate Change* 6 (4), 370–374.

Finnemore, M., 1993. International organizations as teachers of norms: the United Nations educational, scientific, and cultural organization and science policy. *International Organization* 47 (4), 564–597.

Finnemore, M., Sikkink, K., 1998. International norm dynamics and political change. *International Organization* 52 (4), 887–917.

Fisher, D., Leifeld, P., Iwaki, Y., 2013. Mapping the ideological networks of American climate politics. *Climatic Change* 116, 523–545.

Frank, D., Longhofer, W., Schofer, E., 2007. World society, NGOs and environmental policy reform in Asia. *International Journal of Comparative Sociology* 48 (4-5), 275–295.

Hallding, K., Jürisoo, M., Carson, M., Atteridge, A., 2013. Rising powers: the evolving role of BASIC countries. *Climate policy* 13 (5), 608–631.

Henry, A. D., Ingold, K., Nohrstedt, D., Weible, C., 2014. Policy change in comparative contexts: applying the advocacy coalition framework outside of Western Europe and North America. *Journal of Comparative Policy Analysis: Research and Practice* 16 (4), 299–312.

Hironaka, A., 2014. *Greening the globe. World society and environmental change*. Cambridge University Press, New York.

Hochstetler K., Viola E., 2012. Brazil and the politics of climate change: beyond the global commons. *Environmental Politics* 21 (5), 753–771.

Honkonen, T. 2009. The principle of common but differentiated responsibility in post-2012 climate negotiations. *Review of European, Comparative & International Environmental Law* 18 (3), 257–267.

Ingold, K., Fischer, M., Cairney, P., 2016. Drivers for policy agreement in nascent sub-systems: an application of the advocacy coalition framework to fracking policy in Switzerland and the UK. *Policy Studies Journal* 45 (3), 442–463.

Jenkins-Smith, H., Nohrstedt, D., Weible C., Sabatier P. 2014. The advocacy coalition framework: foundations, evolution, and ongoing research. In Sabatier, P., Weible C., (Eds.). *Theories of the policy process*. Westview Press, Boulder CO, 183–224.

Kukkonen, A., Ylä-Anttila, T., Broadbent, J., 2017. Advocacy coalitions, beliefs and climate change policy in the United States. *Public Administration* 95 (3), 713–729.

Lahsen, M., 2004. Transnational locals: Brazilian experiences of the climate regime. In Jasanoff, S., Long, M., (Eds.). *Earthly politics: local and global in environmental governance*. MIT Press, Cambridge MA, 151–172.

Leifeld, P., 2010. Discourse Network Analyzer (DNA) manual. Available online at: <http://www.philipleifeld.de/discourse-network-analyzer-dna/manual/>.

Leifeld, P., Haunss, S., 2012. Political discourse networks and the conflict over software patents in Europe. *European Journal of Political Research* 51 (3), 382–409.

Leifeld, P., 2013. Reconceptualizing major policy change in the advocacy coalition framework: A discourse network analysis of German pension politics. *Policy Studies Journal* 41 (1), 169–198.

Litfin, K., 2000. Advocacy coalitions along the domestic-foreign frontier: globalization and Canadian climate change policy. *Policy Studies Journal* 28, 236–252.

Lodge, M., Matus, K., 2014. Science, badgers, politics: advocacy coalitions and policy change in bovine tuberculosis policy in Britain. *Policy Studies Journal* 42 (3), 367–390.

Longhofer, W., Schofer, E., 2010. National and global origins of environmental association. *American Sociological Review* 75 (4), 505–533.

MacDonald, D., 2008. Explaining the failure in Canadian climate policy. In Compston, H., Bailey, I., (Eds.). *Turning down the heat: the politics of climate policy in affluent democracies*. Palgrave, New York, 223–240.

McArthur, J.W., Werker, E., 2016. Developing countries and international organizations: introduction to the special issue. *The Review of International Organizations* 11 (2), 155–169.

Meyer, J., Frank, D., Hironaka A., Schofer E., Tuma N., 1997. The structuring of a world environmental regime, 1870–1990. *International Organization* 51 (4), 623–51.

McCright, A., Dunlap, R., 2003. Defeating Kyoto: the conservative movement's impact on US climate policy. *Social Problems* 50 (3), 348–373.

Painter, J., Ashe, T., 2012. Cross-national comparison of the presence of climate scepticism in the print media in six countries, 2007–10. *Environmental Research Letters* 7 (4), 044005.

Purdon, M., 2015. Advancing comparative climate change politics: theory and method. *Global Environmental Politics* 15 (3), 1–26.

Rabe, B.G., 2010. The aversion to direct cost imposition: selecting climate policy tools in the United States. *Governance* 23 (4), 583–608.

Rennkamp, B., Haunss, S., Wongsac, K., Ortegad, A., Casamadrid, E., 2017. Competing coalitions: the politics of renewable energy and fossil fuels in Mexico, South Africa and Thailand. *Energy Research & Social Science* 34, 214–223.

Roberts, J.T., Parks, B.C., 2007. *A climate of injustice: global inequality, north-south politics and climate policy*. MIT Press, Cambridge MA.

Roberts, J.T., 2011. Multipolarity and the new world (dis)order: US hegemonic decline and the fragmentation of the global climate regime. *Global Environmental Change* 21 (3), 776–784.

Sabatier, P., Jenkins-Smith, H., 1988. An advocacy coalition model of policy change and the role of policy orientated learning therein. *Policy Sciences* 21 (2/3), 129–168.

Schofer, E., Hironaka A., 2005. The effects of world society on environmental protection outcomes. *Social Forces* 84 (1), 25–47.

Schäfer, M., Ivanova, A., Schmidt, A., 2014. What drives media attention for climate change? Explaining issue attention in Australian, German and Indian print media from 1996 to 2010. *The International Communication Gazette* 76 (2), 152–176.

Sewell, G., 2005. *Actors, coalitions and the framework convention on climate change*. Thesis (Ph. D.), Massachusetts Institute of Technology, Dept. of Urban Studies and Planning.

Sodero, S., 2011. Policy in motion: reassembling carbon pricing policy development in the personal transport sector in British Columbia. *Journal of Transport Geography* 19 (6), 1474–1481.

Stoddart, M., Tindall, D., Smith, J., Haluza-Delay, R., 2017. Media access and political efficacy in the eco-politics of climate change: Canadian national news and mediated policy networks. *Environmental Communication* 11 (3), 386–400.

Stoddart, M., Ylä-Anttila, T., Tindall, D., 2017. Media, politics, and climate change: the ASA task force report and beyond. *Environmental Sociology*.

Stoett, P., 2012. *Global ecopolitics: crisis, governance and justice*. University of Toronto Press, Toronto ON.

Viola, E., 2013. Transformations in Brazilian deforestation and climate policy since 2005. *Theoretical Inquiries in Law* 14, 109–123.

Weible, C., 2005. Beliefs and perceived influence in a natural resource conflict: an advocacy coalition approach to policy networks. *Political Research Quarterly* 58 (3), 461–475.

Ylä-Anttila, T., Swarnakar, P., 2017. Crowding-in: how Indian civil society organizations began mobilizing around climate change. *The British Journal of Sociology* 68 (2), 273–292.